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GENERAL NOTES

An Observatory Under Fire (From the *Astrophysical Journal*, March, 1918). . . . Rumors had reached the astronomical colony at Poulkova, which lies about 20 km. southwest of Petrograd, that bodies of Cossacks were coming toward the capital to restore the ministry of M. Kerensky. The garrison from the village of Zarskoye Selo (site of the summer residence of the former emperor) presently arrived at Poulkova, having been driven out by the Cossacks. On November 11th soldiers from the garrison of Petrograd, with the Red Guard and with artillery, arrived for the relief of that body of troops.

With a zeal which we may imagine must have seemed to the astronomers in excess of its wisdom, those forces from the capital surrounded the observatory on all sides and established batteries of artillery within 400 or 500 meters on both sides of the main building.

Between one o'clock and five-thirty on the afternoon of November 12th the observatory was under an intense artillery fire from the Cossacks. Fortunately, none of the instruments were damaged, altho a shell burst beside the brick foundation of the dome of the large astrographic telescope. Many holes were made in the dome of the great refractor and in the roof of the director's office. The wall of the seismological station was pierced, and we may believe that the instruments registered their largest earthquake. Of course there was much damage to windows. The ground was torn up by numerous holes of the diameter of a meter. The Cossacks retired on the following day.

The Director of the observatory had been able in the preceding days to foresee the dangers of the situation, and had removed the 30-inch objective, as well as the objectives of the other instruments. By a singular good fortune no one of the personnel of the observatory or colony was injured during these exciting events.

It was felt that there was no guaranty that such events might not recur under the present conditions in Russia. Men of science everywhere will certainly wish to join with us in our satisfaction that no more serious damage was done and in offering our congratulations on this escape to Director Belopolsky and his staff, with the hope that the admirable work carried on at that observa-

tory during the past eighty years may continue unimpaired, despite the political and economic changes thru which Russia is passing.

Summer Time. There is certainly no criterion based on great masses of cogent and convincing argument which surpasses the simple rule, "Try it." Five years ago the proposition to advance the clocks one hour during the summer months would have been classed by the great majority of scientists and laymen alike in the same group with circle squarings, perpetual motion, flat-Earth theories, and similar lucubrations of disordered mentalities. Today, without the slightest hitch or inconvenience, the United States finds itself, in common with most of the nations of the Earth, enjoying the advantages of this ridiculously simple scheme of providing for more daylight hours for work and recreation. A few with painfully exact memories, which insisted on recalling that the rising hour was really 6 A. M. instead of the 7 A. M. of the clock face, have long since acquiesced in the new order. The advantages of summer time are so manifest, now that we have tried it, that it seems probable that it will be a permanency, long to outlast the war which called the plan into existence as an economic necessity. Only one class of our population seems to be at all seriously affected by it—the children. Like the birds, the children insist on regulating their lives by the Sun, and are apt to prolong the day of play at the expense of their sleeping hours.

The Passing of the Julian Calendar. Most of us are familiar with Julius Caesar's radical reform of the greatly disordered Roman calendar, how he decreed that the year should average just $365\frac{1}{4}$ days; how he changed the name of the month Quintilis to Julius and robbed poor February of a day in order that July might have its maximum of 31 days, and how Augustus later, not to be outdone by his predecessor, placed his own name on the month Sextilis, which, too, must have no less than 31 days, so another day was levied on the unwilling February. But the constants of the solar system refuse to run in accordance with round numbers, and our seasonal year is really 365 days, 5 hours, 48 minutes and 46 seconds. So the Julian year is too long by 11 minutes and 14 seconds, which amounts to nearly three days in four hundred years. It was Pope Gregory who canceled the ten days which had accumu-

lated by 1582, and introduced the familiar rule for leap year in the Gregorian calendar, in accordance with which only those century years which are divisible by 400 are to be regarded as leap years. This plan will make our calendar "even" with the Sun for nearly three thousand years. But Russia and the countries under the Greek Church refused to adopt this plan, so that their dates are 13 days earlier than those of the rest of the world, and a Russian has been forced, in his foreign correspondence at least, to head his letters in the form "July 8/21." The Orthodox Church has always strenuously opposed the abandonment of the old Julian Calendar, but from press reports it appears that the revolution has finally placed the Julian Calendar in the same limbo with so many other features of the former political order in Russia.

A delightful note in "From an Oxford Note-Book" in the *Observatory* for March, 1918, discusses a book by Captain Cooper on the prediction (?) of earthquakes, and brings back vividly to one of the editors of this publication the days after the great Valparaiso earthquake of 1906 when, as the astronomer in charge of the D. O. Mills Expedition at Santiago, Chile, he was forced, in somewhat halting Spanish, to reassure an excited populace, and to combat Captain Cooper's thesis that it was possible to predict earthquakes from planetary positions. As Captain Cooper was formerly connected with the Chilean navy, I am inclined to attribute the keyword in the following quoted sentence from his book to the printer, but, as it stands, it is worthy of O. Henry at his best:

"...what navigator has not looked for comfort into the dimly-lit barnacle at that mysterious magnetic needle?"

The above naturally calls to mind an answer to a recently set examination in astronomy:

"Each well-equipped ship at sea must carry with it at least three micrometers."

The older astronomy was mainly interested in the exact position and motion of a star; the new astronomy emphasizes the question, "*What* is the star?" The present Draper Catalog of Stellar Spectra contains 9110 entries. It is a pleasure to note from *Popular Astronomy* that the great new Draper Catalog is practically completed and that portions of it are already in the printer's hands. It will give the spectral type of about 223,000 stars. It is impossible

to overestimate the value and the importance to the astronomy of the future of this monumental work.

Service. The little Mt. Hamilton School has an average attendance of eight to twelve pupils. It boasts seven stars on its service flag, as follows:

Malcolm Aitken, U. S. Marine, France.

Wallace Campbell, 2nd Lieutenant, U. S. Engineers, France.

Douglas Campbell, 1st Lieutenant, U. S. Aviation, France (recently brought down his second enemy plane).¹

Kenneth Campbell, Red Cross Ambulance Service, Italy.

Röwen Curtis, U. S. Navy, Radio.

C. Odlin, U. S. Aviation.

E. Odlin, U. S. Aviation.

Douglas Aitken is in the R. O. T. C. at the Presidio, San Francisco; Aileen Macdonald is in a nurses' training school, and has volunteered for service in France.

Wolf's Asteroid. This very interesting asteroid, which has been temporarily named 1918 DB, has now been sufficiently observed to make its orbit fairly well determined and to render it probable that it will not be lost. There was some doubt at first whether it was a comet or an asteroid. It has a period of about four years, and its special features of interest lie in the fact that it has an almost cometary eccentricity which brings it far within the orbit of *Mars*, and, at favorable oppositions, almost as near to the Earth as *Eros*. Its maximum brightness is about magnitude 10 at the most favorable opposition; it can scarcely be more than four miles in diameter, a mere "rock." Wolf's announcement stated that it was accompanied by a satellite, in relatively rapid rotation about the asteroid. Its minute mass would make this impossible, and it is probable that the error may have arisen from observation of some other faint asteroid near by; no such satellite has been detected by American observers.

Aitken's Latest List of 100 New Double Stars. This very interesting and important list of new discoveries by Dr. Aitken contains almost entirely excessively faint or very close, difficult double stars. The number of Aitken stars now amounts to no less

¹May 31. Word has just come that Douglas has been made an "ace," having five enemy planes to his credit.

than 3000, far more close double stars than have been discovered by any other observer. In reducing the positions of these new pairs to the standard epoch 1880.0, and in copying them into the extension of the *General Catalogue*, a very few misprints are found and a few notes suggested.

Aitken 2927. The star *A* is one of the principal stars of a large cluster. The faint components were seen by George Anderson with the 26-inch of the Naval Observatory, and the multiple star is No. 3439 of the *General Catalogue*. The only complete measures of all the components are by Hall and Burnham. The magnitudes are estimated as somewhat greater by each of these observers than by Aitken: both observers agree in estimating *B* as the brightest of the components instead of the faintest. Neither, however, suspected *A* of being a close double.

Aitken 2963. This was found by E. D. Roe and measured on three nights, but his observation was made later than that of Aitken and is not yet published. His measure was

1917.24 250°.7 2".38 9.5 10.0

Aitken 2970. This pair is of the same R. A. as Aitken 1755 and 16' South; the latter is a very similar double.

Aitken 2993¹. The R. A. is 1 min. too small. This makes the position almost identical with that of Aitken 717. The former star is identified with D. M. - 2°(5116) = A. G. Stras. 6812, 8.9 magnitude. Aitken identifies A2993 with A. G. Stras. 6810, 8.7 magnitude, which is 20s pr. and 5' S. If the two pairs are identical there has been considerable change in angle. If not, there are two very similar pairs of equal brightness, very near together in the sky.

The following misprints are obvious:

The heading of column 4 on page 133 should be 3h. Similarly the heading of the same column on page 135 should be 20h. For the second *A* 2978, page 134, read *A* 2979.

ERIC DOOLITTLE.

¹The identifications are correct; both pairs were measured on the same night in 1915. The angular separation of A2993 is less than half as great as that of A717 and the pair is correspondingly more difficult to measure.—R. G. A.

Wolf's Object; Elements and Heliocentric Positions

$E = \text{Feb. } 23.80143 \text{ G. M. T., } 1918.$

$M = 11^\circ 49' 58''.76$

$\Pi = 99^\circ 3' 38''.94$

$\Omega = 110^\circ 39' 58''.49$

$i = 9^\circ 1' 37''.44$

$\phi = 33^\circ 4' 16''.26$

$\text{Log } a = 0.417235$

$\text{Log } q = 0.074596$

$\mu = 839''.7567$

Heliocentric positions from 3rd and last hypothesis. 1918.

Feb. 16 = $l = 137^\circ 56' 28''.65$ $b = +4^\circ 9' 50''.38$. $\text{Log } r = 0.110498$.

Feb. 23 = $l' = 143^\circ 22' 3''.94$ $b' = +4^\circ 54' 20''.57$ $\text{Log } r' = 0.121222$.

Mar. 2 = $l'' = 148^\circ 22' 44''.16$ $b'' = +5^\circ 33' 2''.15$. $\text{Log } r'' = 0.132352$.

Curtate distances from Earth.

$u = 27^\circ 34' 1''.01$. $M = 10^\circ 12' 26''.48$. $\text{Log } \rho = 9.551665$.

$u' = 33^\circ 1' 37''.15$. $M' = 11^\circ 49' 58''.76$. $\text{Log } \rho' = 9.601583$.

$u'' = 38^\circ 3' 31''.54$. $M'' = 13^\circ 24' 38''.81$. $\text{Log } \rho'' = 9.650695$.

F. E. SEAGRAVE.

Telescope for Sale: An Astronomical and Terrestrial Telescope; when drawn out 6 ft. long; object glass $3\frac{3}{4}$ " diameter, with attachments and sun glasses from London Telescope Mfg. Co. Had been in former Telegraph Hill Observatory. Price \$325.00.

The owner is now an inmate of the Relief Home for the Aged and Infirm and will appreciate the assistance the sale of this telescope will give.

Address: PHILLIP WALDORF,

Section c, 14 up.

Relief Home for Aged and Infirm,

Almshouse Tract, 7th Avenue, Sunset,

San Francisco, Calif.

Professor Paul Stroobant is Acting Director of the Royal Observatory of Belgium, at Brussels, in the absence of Professor Georges Lecointe, who is serving his Government in other fields of work. Professor Stroobant has managed to continue some of the work of the observatory and is giving popular lectures on astronomy once a week. These lectures are well attended despite the unfavorable nature of existing conditions.

CORRECTION

On page 87 of the present volume of these publications are the words: "As long ago as 1656 Huyghens, the astronomer whose careful observations paved the way for Kepler's discovery of the laws of planetary motions. . ."

This is, of course, an error, for Kepler died in 1630, one year after Huyghens was born. In writing the sentence I confused Huyghens with Tycho Brahe, under whom Kepler served for a time and whose observations were of the greatest value in the computations leading to the discovery of the laws of planetary motion.

I am indebted to an amateur astronomer friend for calling my attention to this slip.

ROBERT G. AITKEN.

MINUTES OF THE MEETING OF THE BOARD OF DIRECTORS OF THE
ASTRONOMICAL SOCIETY OF THE PACIFIC, HELD IN THE
ANTE-ROOM OF NATIVE SONS HALL, SAN FRANCISCO,
ON APRIL 19, 1918, AT 7.30 P.M.

First Vice-President Mrs. ISAAC ROBERTS presided.

Professor E. E. BARNARD, of Yerkes Observatory, and Bruce Medalist, was elected an Honorary Life Member of the Society.

Mr. JOHN A. BRITTON and Mr. J. HENRY MEYER, of San Francisco, were elected Life Members.

The following were elected as Active Members:

Mr. BERNARD FAYMONVILLE, of San Francisco.

Dr. JULIUS ROSENSTIRN, of San Francisco.

Mr. JESSE W. LILIENTHAL, of San Francisco.

Mr. A. G. TOWNE, of San Francisco.

Mr. A. MACK, of San Francisco.

Mr. LOUIS LISSER, of San Francisco.

Mr. ALBERT M. BENDER, of San Francisco.